



ELECTRONIC TUBE REFERENCE

CL1

Power - Pentode Single (NOT beam) (under 10W) electronic tube

CONSOLIDATED TECHNICAL
DATA

1 SECTION
CONSTRUCTION
PENTODE

Early European series-heater power pentode for audio-output service in transformerless mains receivers.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	8
NOMINAL HEATER	13 V / 200 mA	PARALLEL HEATER	— / —
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION 1 Pentode	
PLATE RESISTANCE	50000 Ω
TRANSCONDUCTANCE	0.0025 S
MAXIMUM PLATE VOLTAGE	200 V
MAXIMUM SCREEN VOLTAGE	200 V
MAXIMUM PLATE DISSIPATION	5 W
MAXIMUM SCREEN DISSIPATION	0.8 W
MAXIMUM CATHODE CURRENT	32 mA
<i>Audio output pentode; maximum ratings and a representative published operating point are promoted.</i>	

CL1 is listed in the supplied valve table as a power pentode. Published operating and characteristic values were transcribed from its target row.

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1938 Philips Miniwatt Vacuum Tube Catalog

Published test conditions and operating points. Values on this page are preserved as reported by this source.

1938 PHILIPS MINIWATT VACUUM TUBE CATALOG

Section 1 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	200 V	Published table operating point
Plate current	25 mA	Published table operating point
Control-grid bias	14 V	Published table operating point
Screen voltage	200 V	Published table operating point
Optimum load resistance	8000 ohm	Published table operating point
Power output	9 W	Published table operating point
Maximum plate dissipation	5 W	Published table rating
Alternate plate voltage	200 V	OperatingPoint2
Alternate plate current	40 mA	OperatingPoint2
Alternate control-grid bias	19 V	OperatingPoint2
Alternate screen voltage	100 V	OperatingPoint2
Alternate load resistance	5000 ohm	OperatingPoint2
Alternate power output	8.8 W	OperatingPoint2

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Transconductance	2500000 μ S	Published table characteristic
Plate resistance	50000 ohm	Published table characteristic
Heater/filament voltage	13 V	Published heater/filament rating
Heater/filament current	200 mA	Published heater/filament rating
Alternate transconductance	3100 μ S	OperatingPoint2
Alternate plate resistance	23000 ohm	OperatingPoint2



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

195X Tunsgram

Published test conditions and operating points. Values on this page are preserved as reported by this source.

195X TUNSGRAM

Section 1 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Typical plate voltage	200 V	—
Typical screen voltage	200 V	—
Typical plate current	25 mA	—
Typical control-grid voltage	-14 V	—
Output power	1.8 W	Single-ended published operating point
Load resistance	8000 Ohm	Single-ended published operating point



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1999 Philips 0-D

Published test conditions and operating points. Values on this page are preserved as reported by this source.

1999 PHILIPS 0-D

Section 1 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
leistung von	6 W	Published datasheet specification
spannung	3 V	Published datasheet specification
HelzZStrom o vttt e e it et it een i eeeneannnn If —	200 A	Published datasheet specification
Anodenspannung iieiiaa i Va	200 V	Published datasheet specification

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Schirmgitterspannung ... , i iiiiiiiie e Vg2	200 V	Published datasheet specification
Neg. Gittervorspannung eveeereennnnnnioss Vg1	14 V	Published datasheet specification
Anodenstrom ... il e la	25 mA	Published datasheet specification
SchirmgitterStrom ovii it Ig	2.4 mA	Published datasheet specification
Max. Steilhelt i e e S max –	5 mA/V	Published datasheet specification
Norm. Steilheit (bei Ja – 25 mA) couot.. Snorm	2.5 mA/V	Published datasheet specification
Innerer Widerstand (bei /a	25 mA	Published datasheet specification
Maximale Anodenleistung oL, Wamax	5 W	Published datasheet specification
Rgl max	1 MΩ	Published datasheet specification
Heizfaden Rfkmax	20 Ω	Published datasheet specification
Heizfaden Vikmax	175 V	Published datasheet specification
Published specification	2	Published datasheet specification
als	0 Ω	Published datasheet specification
Va – Vg2	200 V	Published datasheet specification
Published specification	0	Published datasheet specification
R S	40	Published datasheet specification
Published specification	0 V	Published datasheet specification